

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 1 of 17

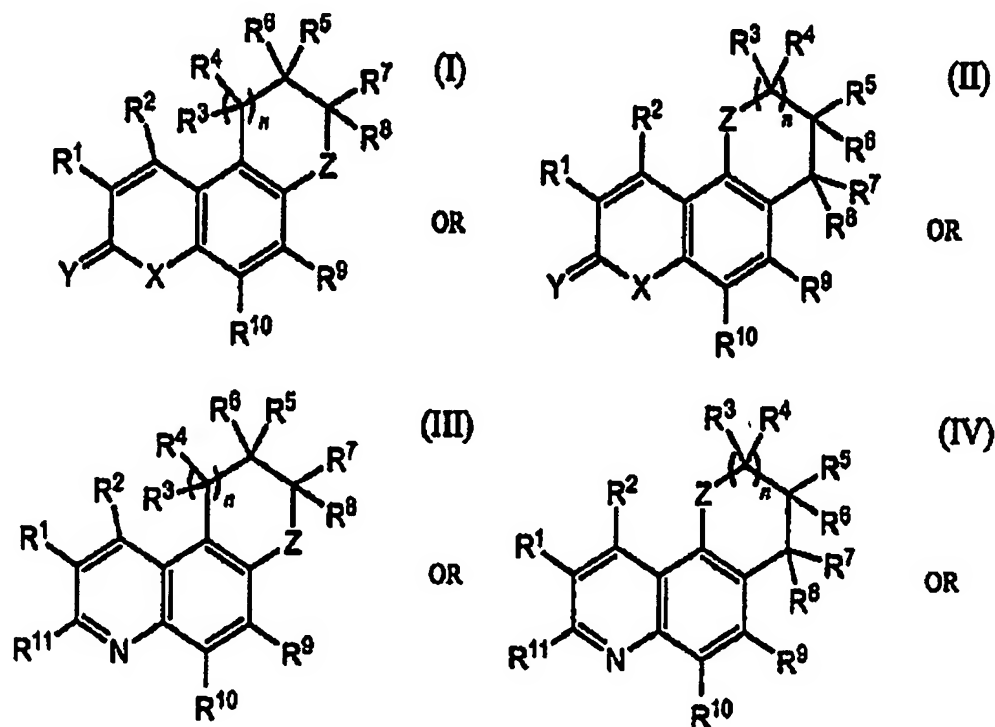
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE TITLE PAGES:

Item [56] References Cited, in OTHER PUBLICATIONS:
in Yudin, please replace "Geterotsikicheskikh" with --Geterotsiklicheskikh--
in the first Yamashkin et al., please replace "Chemistry.of" with --Chemistry of--
in Edwards, J., et al., please replace "(1999)" with --(1998)--
in Boyer, M., please replace
"http://www.australianprescriber.com/magazines/vol19no1/ap19-1-11.htm(accessed on
Jan. 28, 2005)." with --http://www.australianprescriber.com/magazines/vol19no1/ap19-
1-11.htm (accessed on Jan. 28, 2005).--
in Castillo, P., please replace "o-dihydroxyaromatic" with --o-dihydroxyaromatic--

IN THE SPECIFICATION:

In column 2, beginning at line 7, please replace formulas I-VIII with:

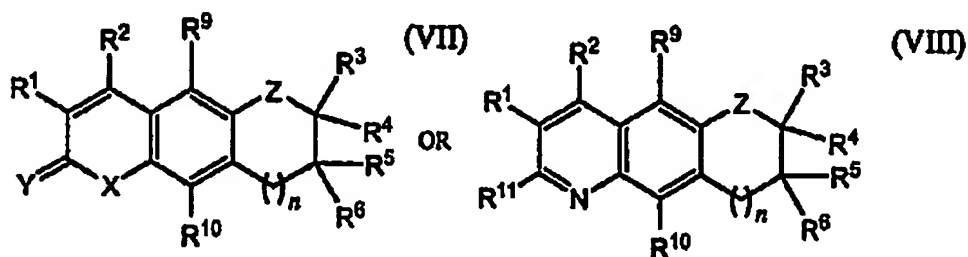
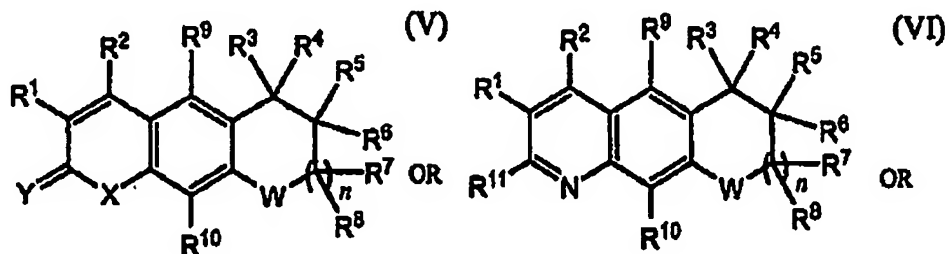


UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

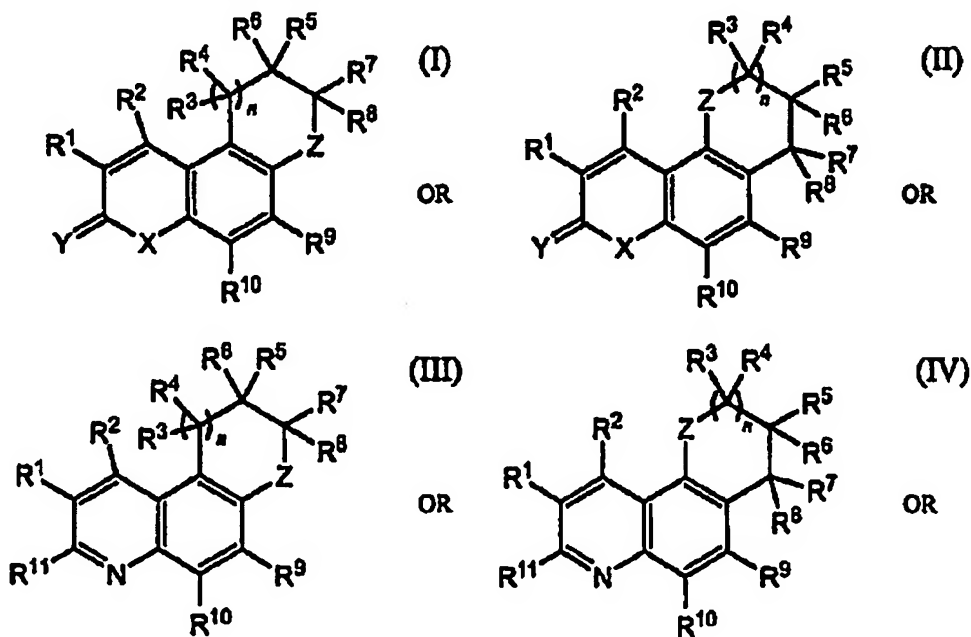
PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 2 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



in column 7, beginning at line 15, please replace formulas I-VIII with:

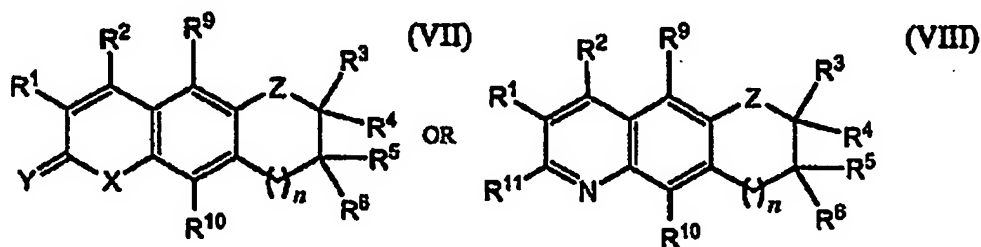
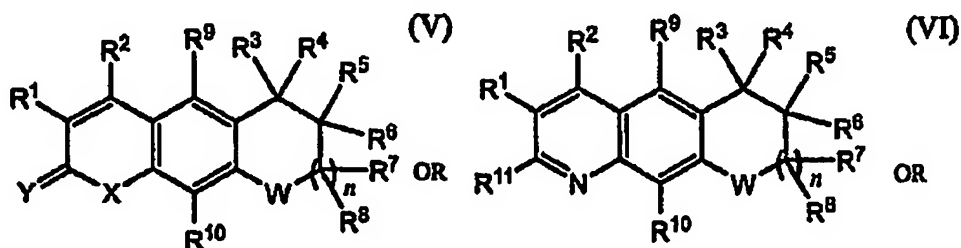


UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

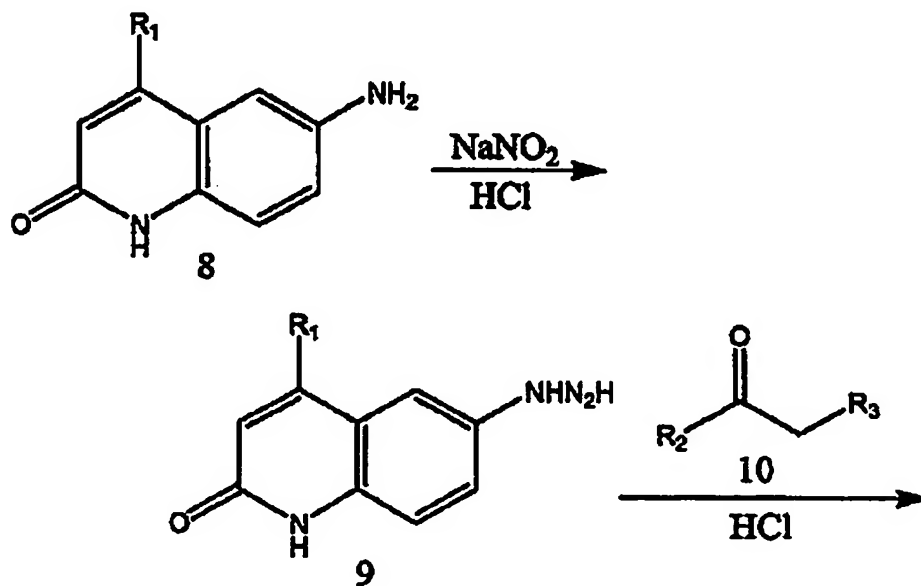
PATENT NO. : 7,026,484 B2
 APPLICATION NO. : 10/080926
 DATED : April 11, 2006
 INVENTOR(S) : Lin Zhi et al.

Page 3 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



in column 24, lines 53-67, please replace the structures in Scheme II with:



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 4 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

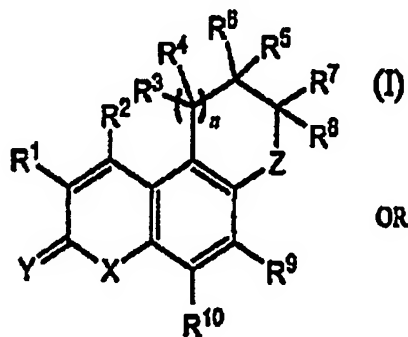
in column 57, lines 4-6, please replace
“(Compound 177, Structure 26 of Scheme IV, where R₂=methyl, R₃=2-hydroxyethyl)”
with --(Compound 177, Structure 26 of Scheme IV, where R₂=methyl, R₃=2-hydroxyethyl--

in column 70, line 21, please replace “chloronation” with --chlorination--

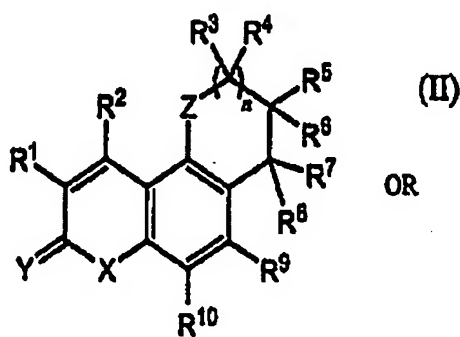
IN THE CLAIMS:

Please replace Claims 1, 4, 26, 28, 29, 30, 32, 33, 34, 42, 43, 50, 52, 53, and 60 with the following Claims:

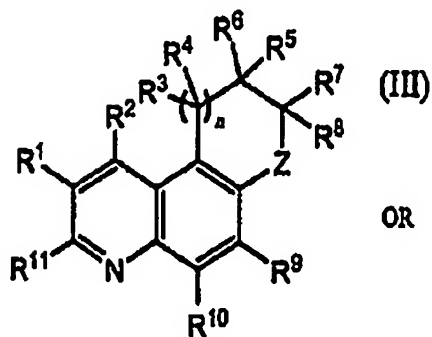
1. A compound of the formula:



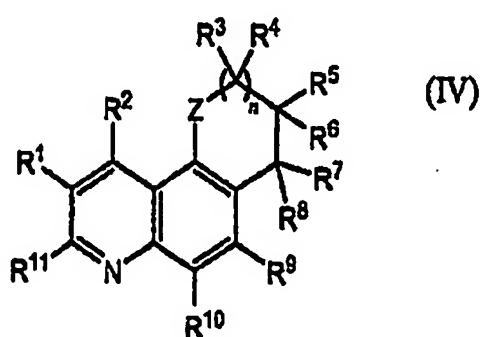
OR



OR



OR



UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 5 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

wherein:

R^1 is selected from among hydrogen, F, Cl, Br, I, NO_2 , OR^{12} , SR^{12} , SOR^{12} , SO_2R^{12} , $NR^{12}R^{12}$, substituted C_1-C_8 alkyl, C_1-C_8 haloalkyl and C_1-C_8 heteroalkyl, wherein the haloalkyl and heteroalkyl groups are optionally substituted;

R^2 is selected from among F, Cl, Br, I, CF_3 , CHF_2 , CH_2F , CF_2Cl , CN, CF_2OR^{12} , CH_2OR^{12} , OR^{12} , SR^{12} , SOR^{12} , SO_2R^{12} , $NR^{12}R^{13}$, substituted C_1-C_8 alkyl, C_1-C_8 haloalkyl, C_1-C_8 heteroalkyl, C_2-C_8 alkenyl and C_2-C_8 alkynyl, wherein the haloalkyl, heteroalkyl, alkenyl and alkynyl groups are optionally substituted;

R^3 is selected from among hydrogen, C_1-C_6 alkyl, C_1-C_6 haloalkyl and C_1-C_6 heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R^4 is selected from among hydrogen F, Cl, Br, I, OR^{12} , $NR^{12}R^{13}$, SR^{12} , SOR^{12} , SO_2R^{12} , C_1-C_8 alkyl, C_1-C_8 haloalkyl, C_1-C_8 heteroalkyl, C_2-C_8 alkynyl, C_2-C_8 alkenyl, aryl, heteroaryl and arylalkyl wherein the alkyl, haloalkyl, heteroalkyl, alkynyl, alkenyl, aryl, heteroaryl and arylalkyl groups are optionally substituted;

R^5 is selected from among hydrogen, C_1-C_6 alkyl, C_1-C_6 haloalkyl and C_1-C_6 heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R^6 is selected from among hydrogen F, Cl, Br, I, OR^{12} , $NR^{12}R^{13}$, SR^{12} , SOR^{12} , SO_2R^{12} , C_1-C_8 alkyl, C_1-C_8 haloalkyl, C_1-C_8 heteroalkyl, C_2-C_8 alkynyl, C_2-C_8 alkenyl, aryl, heteroaryl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl, alkynyl, alkenyl, aryl, heteroaryl and arylalkyl groups are optionally substituted;

R^7 is selected from among hydrogen, C_1-C_6 alkyl, C_1-C_6 haloalkyl and C_1-C_6 heteroalkyl, wherein the alkyl, haloalkyl, and heteroalkyl groups are optionally substituted;

R^8 is selected from among hydrogen F, Cl, Br, I, OR^{12} , $NR^{12}R^{13}$, SR^{12} , SOR^{12} , SO_2R^{12} , C_1-C_8 alkyl, C_1-C_8 haloalkyl, C_1-C_8 heteroalkyl, C_2-C_8 alkynyl, C_2-C_8 alkenyl, aryl, heteroaryl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl, alkynyl, alkenyl, aryl, heteroaryl and arylalkyl groups are optionally substituted; or

R^3 and R^5 taken together form a bond; or

R^5 and R^7 taken together form a bond; or

R^4 and R^6 taken together form a three- to eight-membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted; or

R^6 and R^8 taken together form a three- to eight-membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted;

R^9 and R^{10} each independently is selected from among hydrogen, F, Cl, Br, I, CN, OR^{12} , $NR^{12}R^{13}$, $C_m(R^{12})_{2m}OR^{13}$, SR^{12} , SOR^{12} , SO_2R^{12} , $NR^{12}C(O)R^{13}$, C_1-C_8 alkyl, C_1-C_8 haloalkyl, C_1-C_8 heteroalkyl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl and arylalkyl groups are optionally substituted;

R^{11} is selected from F, Br, Cl, I, CN, OR^{14} , $NR^{14}R^{13}$, and SR^{14} ;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 6 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

R^{12} and R^{13} each independently is selected from the group of hydrogen, C_1 - C_8 alkyl, C_1 - C_8 haloalkyl, C_1 - C_8 heteroalkyl, C_2 - C_8 alkenyl, C_2 - C_8 alkynyl, heteroaryl and aryl wherein the alkyl, haloalkyl, heteroalkyl, alkenyl, alkynyl, heteroaryl and aryl groups are optionally substituted;

R^{14} is selected from among hydrogen, C_1 - C_8 alkyl, C_1 - C_8 haloalkyl, C_1 - C_8 heteroalkyl, aryl, heteroaryl, $C(O)R^{15}$, CO_2R^{15} and $C(O)NR^{15}R^{16}$, wherein the alkyl, haloalkyl, heteroalkyl, aryl and heteroaryl groups are optionally substituted;

R^{15} and R^{16} each independently is selected from among hydrogen, C_1 - C_8 alkyl, C_1 - C_8 haloalkyl, C_1 - C_8 heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

W is O or S;

X is N $\{R^{14}\}$;

Y is selected from among O, S, N $\{R^{12}\}$ and NO $\{R^{12}\}$;

Z is N $\{R^{12}\}$;

n is 0; and

m is 0 or 1;

or a pharmaceutically acceptable salt thereof.

4. A compound according to claim 1, wherein R^2 is selected from among F, Cl, Br, CF_3 , CF_2Cl , CF_2H , CFH_2 , substituted C_1 - C_4 alkyl, C_1 - C_4 haloalkyl, C_1 - C_4 heteroalkyl, C_2 - C_4 alkenyl and C_2 - C_4 alkynyl, wherein the haloalkyl, heteroalkyl, alkenyl and alkynyl groups are optionally substituted.

26. A compound according to claim 1, wherein:

R^6 and R^8 each independently is selected from among hydrogen, C_1 - C_6 alkyl, C_1 - C_6 haloalkyl, C_1 - C_6 heteroalkyl, heteroaryl and aryl, wherein the alkyl, haloalkyl, heteroalkyl, heteroaryl and aryl groups are optionally substituted; or

R^6 and R^8 taken together form a three to eight membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted.

28. A compound according to claim 1, wherein:

R^1 is selected from among hydrogen, F, Cl, Br, I, substituted C_1 - C_6 alkyl, C_1 - C_6 haloalkyl and C_1 - C_6 heteroalkyl, wherein the haloalkyl and heteroalkyl groups are optionally substituted;

R^2 is selected from among F, Cl, Br, CF_3 , CF_2Cl , CF_2H , CFH_2 , substituted C_1 - C_6 alkyl, C_1 - C_6 haloalkyl and C_1 - C_6 heteroalkyl, wherein haloalkyl and heteroalkyl groups are optionally substituted; and

R^3 and R^4 each independently is selected from among hydrogen, C_1 - C_6 alkyl, C_1 - C_6 haloalkyl and C_1 - C_6 heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 7 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

29. A compound according to claim 28, wherein

R⁵ through R⁸ each independently is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted; or

R⁶ and R⁸ taken together form a four to six membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted.

30. A compound according to claim 29, wherein:

R⁹ and R¹⁰ each independently is selected from among hydrogen, F, Cl, Br, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R¹² is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl, C₁-C₆ heteroalkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, heteroaryl and aryl, wherein the alkyl, haloalkyl, heteroalkyl, alkenyl, alkynyl, heteroaryl and aryl groups are optionally substituted; and

R¹⁴ is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, C(O)R¹⁵, CO₂R¹⁵ and C(O)NR¹⁵R¹⁶, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted.

32. A compound according to claim 1, wherein said compound is selected from among:

- 6-Methyl-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- 5-Isopropyl-6-methyl-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- 5-Allyl-6-methyl-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- 5-(4-Methoxyphenyl)-6-methyl-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- 5-(3-Trifluoromethylphenyl)-6-methyl-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- 4-Trifluoromethyl-5,6,7,8-tetrahydrocyclopentano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- 4-Trifluoromethyl-5,6,7,8,9,10-hexahydrocycloheptano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- (±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-trifluoroethyl-4-trifluoromethylcyclopentano[g]pyrrolo-[3,2-*f*]quinolin-2(1*H*)-one;
- (±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-ethyl-4-trifluoromethylcyclopentano-[g]pyrrolo[3,2-*f*]-quinolin-2(1*H*)-one;
- (±)-5,6-Dihydro-5,6-*cis*-dimethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]-quinolin-2(1*H*)-one;
- (±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-propyl-4-trifluoromethylcyclopentano-[g]pyrrolo-[3,2-*f*]quinolin-2(1*H*)-one;
- (±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-(3-furanylmethyl)-4-trifluoromethylcyclopentano[g]-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
- (±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-(3-thiophenemethyl)-4-trifluoromethylcyclopentano[g]-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 8 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 82, Line 13 should read

(±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-(2-methylpropyl)-4-trifluoromethylcyclopentano
[g]-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-(2,2,2-chlorodifluoro-ethyl)-4-
trifluoromethylcyclopentano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-cyclopropylmethyl-4-
trifluoromethylcyclopentano[g]-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4c,5,6,7,7a(*cis*),8-Hexahydro-8-(2,2-dimethoxyethyl)-4-trifluoromethylcyclo-
pentano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4c,5,6,7,8,8a(*cis*)-Hexahydro-9-(2,2,2-trifluoroethyl)-4-trifluoromethyl-9*H*-
cyclohexano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4c,5,6,7,8,9,9a(*cis*),10-Octahydro-10-(2,2,2-trifluoroethyl)-4-
trifluoromethylcycloheptano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-6-ethyl-5-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-
pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-butyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-
pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-(4-nitrophenyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-
trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-(4-dimethylaminophenyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-
trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-(4-methoxyphenyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-
trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-(3-trifluoromethylphenyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-
trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-(4-fluorophenyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-
trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-Dihydro-5-phenyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo-3,2-*f*-
quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-(4-methoxyphenyl)-6-methyl-4-trifluoromethyl-7*H*-pyrrolo
[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-(4-methoxyphenyl)-6-methyl-7-(2,2-dimethoxyethyl)-4-
trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-isopropyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-
7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 9 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

(±)-5,6-Dihydro-5-ethyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo-[3,2-f]quinolin-2(1H)-one;
(±)-5,6-Dihydro-5-ethyl-6-propyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo-[3,2-f]quinolin-2(1H)-one;
(±)-5,6-Dihydro-5-(2-ethoxycarbonyl-ethyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5,6-Dimethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
6-Methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
6-Ethyl-5-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-Ethyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-Ethyl-6-propyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5,6,7,8-Tetrahydro-8-(2,2,2-trifluoroethyl)-4-trifluoromethylcyclopentano[g]-pyrrolo[3,2-f]quinolin-2(1H)-one;
8-Trifluoroethyl-4-trifluoromethyl-6,8-dihydrocyclopentano[g]pyrrolo[3,2-f]quinolin-2(1H)-one;
9-Trifluoroethyl-trifluoromethyl-9H-benzo[g]pyrrolo[3,2-f]quinolin-2(1H)-one;
5-(3-Trifluoromethylphenyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-(4-Fluorophenyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-(2-Ethoxycarbonyl-ethyl)-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-Hydroxymethyl-6-ethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-Methyl-6-(1-hydroxyethyl)-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-Methyl-6-acetyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-Formyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
5-Acetyloxymethyl-6-ethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinolin-2(1H)-one;
2-Acetyloxy-5-hydroxymethyl-6-ethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7H-pyrrolo[3,2-f]quinoline;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 10 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

6-Ethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
5-Ethoxymethyl-6-ethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]-
quinolin-2(1*H*)-one;
(+)-6-(1-Methoxyethyl)-5-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo
[3,2-*f*]quinolin-2(1*H*)-one;
7-Allyl-6-methyl-4-trifluoromethyl-5*H*-pyrrolo[2,3-*f*]quinolin-2(1*H*)-one;
6-Ethyl-7-methyl-4-trifluoromethyl-5*H*-pyrrolo[2,3-*f*]quinolin-2(1*H*)-one;
7-(3-Trifluoromethylphenyl)-6-methyl-4-trifluoromethyl-5*H*-pyrrolo[2,3-*f*]quinolin-2
(1*H*)-one;
7-(2-Hydroxyethyl)-6-methyl-4-trifluoromethyl-5*H*-pyrrolo[2,3-*f*]quinolin-2(1*H*)-one;
(+)-4*c*,5,6,7,7*a*(*cis*),8-Hexahydro-8-(2,2,2-trifluoroethyl)-4-trifluoromethyl-
cyclopentano-[*g*]-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(-)-4*c*,5,6,7,7*a*(*cis*),8-Hexahydro-8-(2,2,2-trifluoroethyl)-4-
trifluoromethylcyclopentano-[*g*]-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-Dihydro-6-hydroxymethyl-4-trifluoromethylpyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-Dihydro-7-ethyl-6-hydroxymethyl-4-trifluoromethylpyrrolo[3,2-*f*]quinolin-2
(1*H*)-one;
5-Methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethylpyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
6-Formyl-5-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]
quinolin-2(1*H*)-one; and
5,6-Dimethyl-7-(2,2-difluorovinyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-
2(1*H*)-one.

Col. 84, line 1 should read

33. A compound according to claim 1, wherein said compound is selected from the group consisting of:

(±)-4*c*,5,6,7,7*a*(*cis*),8-Hexahydro-8-(2,2,2-trifluoroethyl)-4-
trifluoromethylcyclopentano-[*g*]-pyrrolo-[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4*c*,5,6,7,7*a*(*cis*),8-Hexahydro-8-ethyl-4-trifluoromethylcyclopentano-[*g*]pyrrolo
[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-Dihydro-5,6-*cis*-dimethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo
[3,2-*f*]-quinolin-2(1*H*)-one;
(±)-4*c*,5,6,7,7*a*(*cis*),8-Hexahydro-8-propyl-4-trifluoromethylcyclopentano-[*g*]pyrrolo-
[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4*c*,5,6,7,7*a*(*cis*),8-Hexahydro-8-(2,2,2-chlorodifluoroethyl)-4-trifluoromethylcyclo-
pentano-[*g*]-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-4*c*,5,6,7,7*a*(*cis*),8-Hexahydro-8 cyclopropylmethyl-4-trifluoromethylcyclopentano
[*g*]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 11 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

(±)4c,5,6,7,8,8a(*cis*)-Hexahydro-9-(2,2,2-trifluoroethyl)-4-trifluoromethyl-9*H*-cyclohexano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis* -Dihydro-6-ethyl-5-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-butyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-Dihydro-5-ethyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-Dihydro-5-ethyl-6-propyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(±)-5,6-*cis*-Dihydro-5-methyl-6-ethyl-7-(2,2,2-trifluoroethyl)-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
5,6-Dimethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
6-Methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
6-Ethyl-5-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
5-Ethyl-6-methyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
5,6,7,8-Tetrahydro-8-trifluoroethyl-4-trifluoromethylcyclopentano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
6-Ethyl-7-(2,2,2-trifluoroethyl)-4-trifluoromethyl-7*H*-pyrrolo[3,2-*f*]quinolin-2(1*H*)-one;
(+)-4c,5,6,7,7a(*cis*)-8-Hexahydro-8-(2,2,2-trifluoroethyl)-4-trifluoromethylcyclopentano[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one; and
(-)-4c,5,6,7,7a(*cis*)-8-Hexahydro-8-(2,2,2-trifluoroethyl)-4-trifluoromethylcyclopentano-[g]pyrrolo[3,2-*f*]quinolin-2(1*H*)-one.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

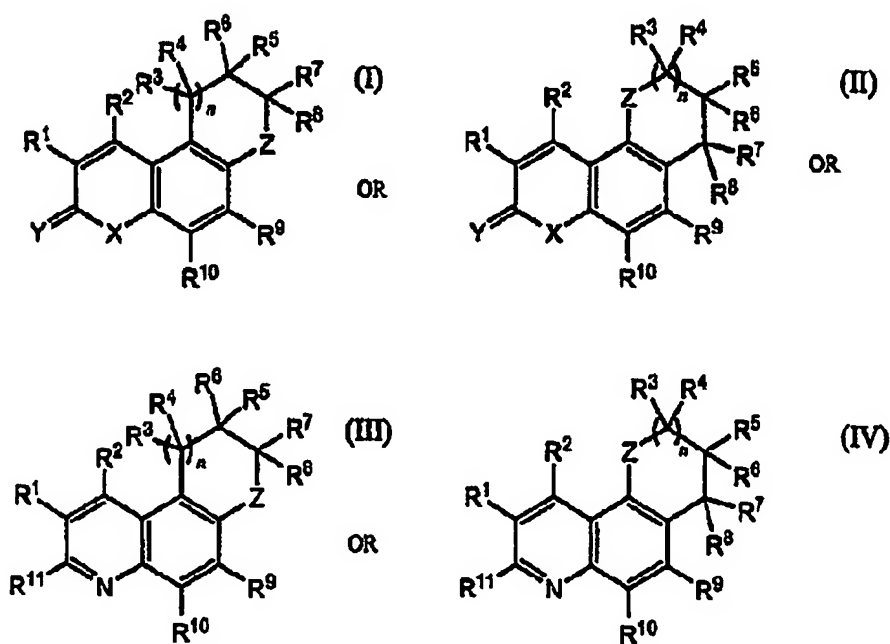
PATENT NO. : 7,026,484 B2
 APPLICATION NO. : 10/080926
 DATED : April 11, 2006
 INVENTOR(S) : Lin Zhi et al.

Page 12 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Col. 84, line 64 should read

34. A pharmaceutical composition, comprising:
 a pharmaceutically acceptable carrier; and
 a compound of formula:



wherein:

R^1 is selected from among hydrogen, F, Cl, Br, I, NO_2 , OR^{12} , SR^{12} , SOR^{12} , SO_2R^{12} , $\text{NR}^{12}\text{R}^{13}$, $\text{C}_1\text{-C}_8$ alkyl, $\text{C}_1\text{-C}_8$ haloalkyl and $\text{C}_1\text{-C}_8$ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R^2 is selected from among F, Cl, Br, I, CF_3 , CHF_2 , CH_2F , CH_2Cl , CN, $\text{CF}_2\text{OR}^{12}$, $\text{CH}_2\text{OR}^{12}$, OR^{12} , SR^{12} , SOR^{12} , SO_2R^{12} , $\text{NR}^{12}\text{R}^{13}$, substituted $\text{C}_1\text{-C}_8$ alkyl, $\text{C}_1\text{-C}_8$ haloalkyl, $\text{C}_1\text{-C}_8$ heteroalkyl, $\text{C}_2\text{-C}_8$ alkenyl and $\text{C}_2\text{-C}_8$ alkynyl, wherein the haloalkyl, heteroalkyl, alkenyl and alkynyl groups are optionally substituted;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 13 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

R³ is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R⁴ is selected from among hydrogen, F, Cl, Br, I, OR¹², NR¹²R¹³, SR¹², SOR¹², SO₂R¹², C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl, C₂-C₈ alkynyl, C₂-C₈ alkenyl, aryl, heteroaryl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl, alkynyl, alkenyl, aryl, heteroaryl and arylalkyl groups are optionally substituted;

R⁵ is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R⁶ is selected from among hydrogen, F, Cl, Br, I, OR¹², NR¹²R¹³, SR¹², SOR¹², SO₂R¹², C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl, C₂-C₈ alkynyl, C₂-C₈ alkenyl, aryl, heteroaryl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl, alkynyl, alkenyl, aryl, heteroaryl and arylalkyl groups are optionally substituted;

R⁷ is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R⁸ is selected from among hydrogen, F, Cl, Br, I, OR¹², NR¹²R¹³, SR¹², SOR¹², SO₂R¹², C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl, C₂-C₈ alkynyl, C₂-C₈ alkenyl, aryl, heteroaryl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl, alkynyl, alkenyl, aryl, heteroaryl and arylalkyl groups are optionally substituted; or

R³ and R⁵ taken together form a bond; or

R⁵ and R⁷ taken together form a bond; or

R⁴ and R⁶ taken together form a three- to eight-membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted; or

R⁶ and R⁸ taken together form a three- to eight-membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted;

R⁹ and R¹⁰ each independently is selected from among hydrogen, F, Cl, Br, I, CN, OR¹², NR¹²R¹³, C_m(R¹²)_{2m}OR¹³, SR¹², SOR¹², SO₂R¹², NR¹²C(O)R¹³, C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl and arylalkyl groups are optionally substituted;

R¹¹ is selected from among hydrogen, F, Br, Cl, I, CN, OR¹⁴, NR¹⁴R¹³ and SR¹⁴;

R¹² and R¹³ each independently is selected from among hydrogen, C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl, C₂-C₈ alkenyl, C₂-C₈ alkynyl, heteroaryl and aryl, wherein the alkyl, haloalkyl, heteroalkyl, alkenyl, alkynyl, heteroaryl and aryl groups are optionally substituted;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 14 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

R^{14} is selected from among hydrogen, C_1 - C_8 alkyl, C_1 - C_8 haloalkyl, C_1 - C_8 heteroalkyl, aryl, heteroaryl, $C(O)R^{15}$, CO_2R^{15} and $C(O)NR^{15}R^{16}$, wherein the alkyl, haloalkyl, heteroalkyl, aryl and heteroaryl groups are optionally substituted;

R^{15} and R^{16} each independently is selected from among hydrogen, C_1 - C_8 alkyl, C_1 - C_8 haloalkyl and C_1 - C_8 heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

W is O or S;

X is $N\{R^{14}\}$;

Y is selected from among O, S, $N\{R^{12}\}$ and $N\{OR^{12}\}$;

Z is $N\{R^{12}\}$;

n is 0; and

m is 0 or 1;

or a pharmaceutically acceptable salt thereof.

42. A pharmaceutical composition according to claim 34, wherein R^{11} is selected from among F, Cl, CN, OR^{14} , $NR^{14}R^{13}$ and SR^{14} .

43. A pharmaceutical composition according to claim 42, wherein R^{11} is selected from among F, Cl, OR^{14} , SR^{14} , $NR^{14}R^{13}$.

50. A pharmaceutical composition according to claim 49, wherein:

R^5 through R^8 each independently is selected from among hydrogen, C_1 - C_6 alkyl, C_1 - C_6 haloalkyl and C_1 - C_6 heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted; or

R^6 and R^8 taken together form a four to six membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted.

52. A pharmaceutical composition according to claim 51 wherein Y is O or S.

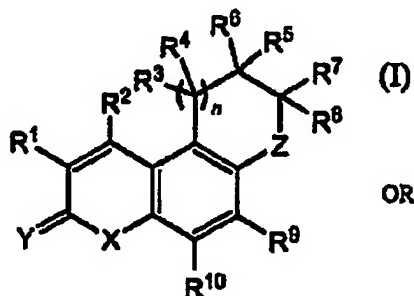
UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
 APPLICATION NO. : 10/080926
 DATED : April 11, 2006
 INVENTOR(S) : Lin Zhi et al.

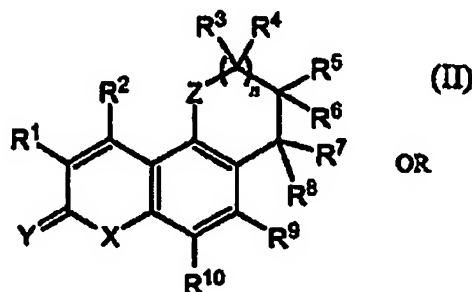
Page 15 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

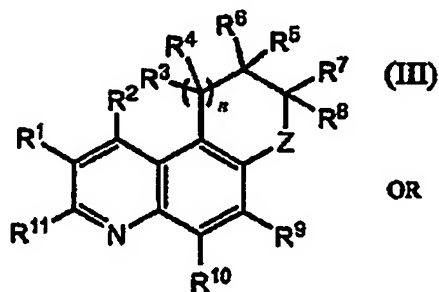
53. A compound of formula:



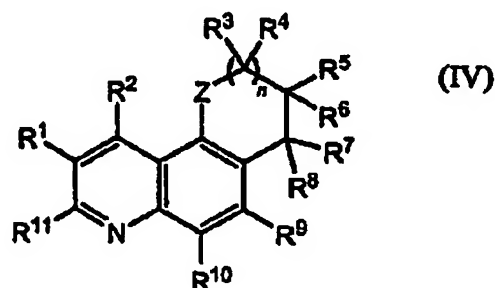
OR



OR



OR



wherein:

R^1 is selected from among hydrogen, F, Cl, Br, I, NO_2 , OR^{12} , SR^{12} , SOR^{12} , SO_2R^{12} , $\text{NR}^{12}\text{R}^{12}$, $\text{C}_1\text{-C}_8$ alkyl, $\text{C}_1\text{-C}_8$ haloalkyl and $\text{C}_1\text{-C}_8$ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R^2 is selected from among F, Cl, Br, CF_3 , CHF_2 , CH_2F , CF_2Cl , $\text{CF}_2\text{OR}^{12}$, $\text{CH}_2\text{OR}^{12}$, OR^{12} , SR^{12} , SOR^{12} , SO_2R^{12} , $\text{NR}^{12}\text{R}^{13}$, substituted $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_1\text{-C}_6$ haloalkyl and $\text{C}_1\text{-C}_6$ heteroalkyl, wherein the haloalkyl, and heteroalkyl groups are optionally substituted;

R^3 is selected from among hydrogen, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_1\text{-C}_6$ haloalkyl and $\text{C}_1\text{-C}_6$ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R^4 is selected from among hydrogen, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_1\text{-C}_6$ haloalkyl and $\text{C}_1\text{-C}_6$ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R^5 is selected from among hydrogen, $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_1\text{-C}_6$ haloalkyl and $\text{C}_1\text{-C}_6$ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 16 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

R⁶ is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl, C₁-C₆ heteroalkyl, heteroaryl and aryl, wherein the alkyl, haloalkyl, heteroalkyl, heteroaryl and aryl groups are optionally substituted;

R⁷ is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

R⁸ is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl, C₁-C₆ heteroalkyl, heteroaryl and aryl, wherein the alkyl, haloalkyl, heteroalkyl, heteroaryl and aryl groups are optionally substituted; or

R³ and R⁵ taken together form a bond; or

R⁵ and R⁷ taken together form a bond; or

R⁴ and R⁶ taken together form a three- to eight-membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted;

R⁶ and R⁸ taken together form a three- to eight-membered saturated or unsaturated carbocyclic ring, wherein the carbocyclic ring is optionally substituted;

R⁹ and R¹⁰ each independently is selected from among hydrogen, F, Cl, Br, I, CN, OR¹², NR¹²R¹³, C_m(R¹²)_{2m}OR¹³, SR¹², SOR¹², SO₂R¹², NR¹²C(O)R¹³, C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl and arylalkyl, wherein the alkyl, haloalkyl, heteroalkyl and arylalkyl groups are optionally substituted;

R¹¹ is selected from among F, Br, Cl, I, CN, OR¹⁴, NR¹⁴R¹³ and SR¹⁴;

R¹² and R¹³ each independently is selected from among hydrogen, C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl, C₂-C₈ alkenyl, C₂-C₈ alkynyl, heteroaryl and aryl, wherein the alkyl, haloalkyl, heteroalkyl, alkenyl, alkynyl, heteroaryl and aryl groups are optionally substituted;

R¹⁴ is selected from among hydrogen, C₁-C₈ alkyl, C₁-C₈ haloalkyl, C₁-C₈ heteroalkyl, aryl, heteroaryl, C(O)R¹⁵, CO₂R¹⁵ and C(O)NR¹⁵R¹⁶, wherein the alkyl, haloalkyl, heteroalkyl, aryl and heteroaryl groups are optionally substituted;

R¹⁵ and R¹⁶ each independently is selected from among hydrogen, C₁-C₈ alkyl, C₁-C₈ haloalkyl and C₁-C₈ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted;

W is O or S;

X is N {R¹⁴};

Y is selected from among O, S, N {R¹²} and NO {R¹²};

Z is N {R¹²};

n is 0; and

m is 0 or 1;

or a pharmaceutically acceptable salt thereof.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,026,484 B2
APPLICATION NO. : 10/080926
DATED : April 11, 2006
INVENTOR(S) : Lin Zhi et al.

Page 17 of 17

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

60. A compound according to claim 34, wherein:

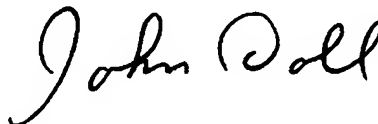
R⁵ and R⁷ each independently is selected from among hydrogen, C₁-C₆ alkyl, C₁-C₆ haloalkyl and C₁-C₆ heteroalkyl, wherein the alkyl, haloalkyl and heteroalkyl groups are optionally substituted; or

R⁵ and R⁷ taken together form a bond.

This certificate supersedes all previously issued the Certificates of Correction.

Signed and Sealed this

Thirtieth Day of June, 2009



JOHN DOLL

Acting Director of the United States Patent and Trademark Office